

CLAIMS

1. A process of extracting oxygenates from a hydrocarbon stream using an extraction solvent comprising a polar organic solvent and water, wherein the polar organic solvent and water are added separately in the extraction process.
2. The process according to claim 1, wherein the hydrocarbon stream is the fractionated hydrocarbon condensation product of a Fischer-Tropsch reaction.
3. The process according to claim 2, wherein the hydrocarbon stream is the fractionated hydrocarbon condensation product of a low temperature Fischer-Tropsch reaction.
4. The process according to claim 3, wherein, prior to extraction, the hydrocarbon condensation product contains 15% to 30% by weight olefins and 5% to 15% by weight oxygenates.
5. The process according to claim 1, wherein the liquid-liquid extraction takes place in a liquid extraction column and the polar organic solvent and water are added separately to the column.
6. The process according to claim 5, wherein the hydrocarbon stream is fed into the extraction column at, or near, the bottom thereof, a polar organic solvent stream is fed into the extraction column at, or near, the top thereof, and a water stream is fed into the extraction column between the hydrocarbon stream and polar organic solvent stream.
7. The process according to claim 6, wherein a raffinate from the extraction column is sent to a raffinate stripper column from which a

hydrocarbon feed stream containing olefins and paraffins and less than 0.2% by weight oxygenates exits as a bottoms product.

8. The process according to claim 7, wherein a raffinate from the extraction column is sent to a raffinate stripper column from which a hydrocarbon feed stream containing olefins and paraffins and less than 0.02% by weight oxygenates exits as a bottoms product.
9. The process according to claim 8, wherein a raffinate from the extraction column is sent to a raffinate stripper column from which a hydrocarbon feed stream containing olefins and paraffins and less than 0.01% by weight oxygenates exits as a bottoms product.
10. The process according to claim 1, wherein an extract from the liquid-liquid extraction is sent to a solvent recovery column from which a tops product comprising polar organic solvent, olefins and paraffins is recycled to the extraction step, thereby enhancing the overall recovery of olefins and paraffins.
11. The process according to claim 10, wherein the aqueous phase of a bottoms product from the solvent recovery column is recycled to the extraction step.
12. The process according to claim 1, wherein the polar organic solvent is methanol.
13. The process according to claim 11, wherein the extraction solvent has a water content of more than 3% by weight.
14. The process according to claim 12, wherein the extraction solvent has a water content of about 5% - 15% by weight.

15. The process according to claim 13 or claim 14, wherein the hydrocarbon stream is fractionated in the C₈ to C₁₆ range.
16. The process according to claim 15, wherein the hydrocarbon stream is fractionated in the C₁₀ to C₁₃ range.
17. The process according to any one of the preceding claims, wherein the recovery of olefins and paraffins over the oxygenate extraction process is greater than 70%.
18. The process according to claim 17, wherein the recovery of olefins and paraffins over the oxygenate extraction process is greater than 80%.
19. The process according to any one of the preceding claims, wherein the olefin/paraffin ratio in the hydrocarbon stream over the oxygenate extraction process is substantially preserved.